



EURASIAN - AMERICAN PARTNERSHIP FOR  
**ECOLINKS**  
ENVIRONMENTALLY SUSTAINABLE ECONOMIES

**Annual**

**Report**

**2000**





**Mission statement –**

**P**romoting sustainable partnerships among businesses,  
  
local governments, and associations in Central and  
  
Eastern Europe, the Former Soviet Union and the U.S.  
  
and thereby helping to solve urban and  
  
industrial environmental problems in the region.



# PREFACE

At the beginning of the last decade of the Twentieth Century, the Soviet Union fell, leaving in its wake more than thirty countries in Europe and Eurasia either newly independent or without a major partner to support them. The United States moved quickly to reach out to assist them in their transition towards market-based economic systems and more open and democratic governments. The United States Agency for International Development (USAID) has played a key role in this effort. The enormous environmental problems facing these countries have been a high priority for USAID in its programs in the region.

Municipalities and industries - the focus of this report - face a wide range of problems including:

- Inadequate water and wastewater treatment capacity.
- Inefficient, highly polluting industrial and public utility facilities.
- Poor waste management practices.
- Weak management systems to identify and remedy environmental problems.

The EcoLinks environmental partnership program plays a central role in USAID's strategy to help the countries of the region meet these enormous challenges. EcoLinks is not a traditional technical assistance program. Rather, the program plays a catalytic role in fostering sustainable partnerships among businesses, municipalities, and associations that transcend national boundaries – among countries in the region and between the region and the United States.

EcoLinks promotes partnerships that are based on common needs and interests, thus helping to assure long-term, sustainable relationships. These partnerships allow businesses and municipalities to meet domestic requirements as well as the demands of a global marketplace that increasingly insists on cleaner products and practices. Benefits accrue to both partners as the relationship evolves.

In the case of partnerships involving US organizations, EcoLinks partnerships provide a practical means for US partners to gain experience working in the Region and to showcase their technologies and experience.

The EcoLinks program is new. It was announced by USAID in mid-1998 and became fully operational in early 1999. Yet despite its short history the program has made important contributions to the environmental and economic needs of Central and Eastern Europe and Eurasia, to the benefit of the region and to the United States.

We are proud of our achievements, but keenly aware of the challenges that lie ahead. In the following pages we provide a report on where we have been, and where we plan to go in the coming months.



**Gene V. George**

*Director, Office for Environment, Energy and Social Transition, Bureau for Europe and Eurasia, USAID*



“On behalf of the “Clean Sky for Vladivostok” project work team, we would like to express our deep gratitude to the EcoLinks Program for support of activities solving an urgent ecological problem, which affects the whole 850,000 population of Vladivostok City.

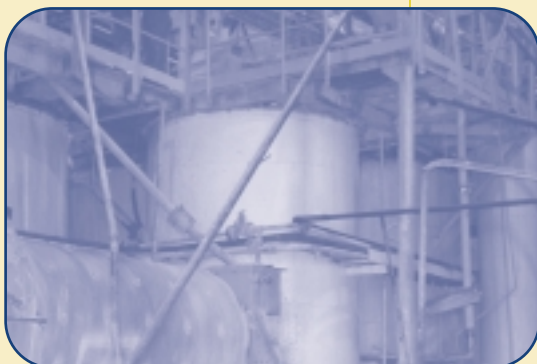
A major outcome of the project was that EcoLinks’ \$50,000 grant support persuaded the Vladivostok Municipality to invest \$48,000 of matching municipal funds to the project. Without both these sources of financing, it would have been impossible for many years to accomplish what has been done by January 2001.”

**MIKHAIL POLYLIKH, DIRECTOR OF THE VLADIVOSTOK WASTE-TO-ENERGY FACILITY,  
ALEXEI FALALEEV, COORDINATOR OF THE  
“CLEAN SKY FOR VLADIVOSTOK” PROJECT, RUSSIA**



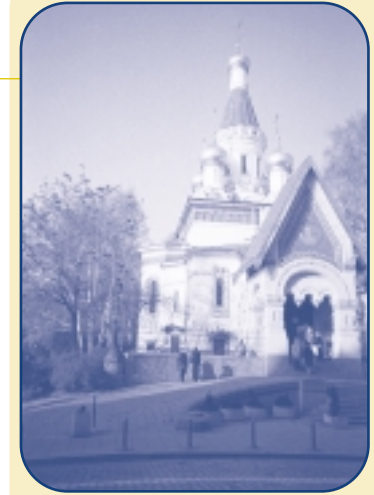
“...The combined effect of the US Embassy System, the Department of Commerce, the US Export-Import Bank and the USAID’s EcoLinks [Program] on small and medium-sized US environmental businesses cannot be exaggerated—this support is the lifeblood of US environmental export projects in the 21st century.”

**MILTON CROW, VP, R&D, GREENTECHTEXAS  
HOUSTON, TEXAS**



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“All the phone calls, emails and faxes in the world can’t replace a face-to-face meeting. The EcoLinks QRA program makes such meetings possible. Lemna was able to meet face-to-face with a potential business partner and a potential client and figure out if there was a match and how to proceed. The QRA program is a unique program that creatively helps US and Eastern European businesses find potential partners and then meet face-to-face in order to make progress toward a relationship designed to solve a specific environmental problem.”

**POLDI GERARD**  
**VICE PRESIDENT**  
**LEMNA INTERNATIONAL, INC.**  
**MINNEAPOLIS, MN**



# INTRODUCTION

Governments and businesses in the Europe and Eurasia (E&E) Region must contend with particularly difficult problems as they struggle to balance economic and environmental concerns rooted in decades of neglect. The United States Agency for International Development (USAID) has taken up the challenge to assist these countries. EcoLinks is a key part of USAID's strategy to help businesses, municipalities, and associations meet their enormous environmental challenges.

EcoLinks is a new form of technical assistance that focuses on technology transfer, providing support to businesses and municipalities facing difficult decisions about environmental technology needs and management practices. Rather than directly investing in environmental technology, EcoLinks promotes partnerships between businesses, municipalities, and associations in the E&E Region that are using market-driven solutions to their environmental problems, and can also include U.S. organizations that are willing to form partnerships to find those solutions. In fostering these partnerships, EcoLinks is able to leverage its resources and those of the participants.

The focus of EcoLinks technology transfer activities is the provision of grants and the fostering of opportunities in trade and investment. Organizations from the E&E Region and the United States are able to benefit from access to grants that assist them in formulating problems and in making contacts. Similarly, these organizations can take advantage of the Environmental Technology Representatives stationed in the Region to assist them in the identification and development of commercial ventures.

The partnerships that EcoLinks promotes are based on common needs and interests to ensure long-term, sustainable relationships.

These partnerships function on a number of levels and allow benefits to accrue to both partners: Participants in the region can meet both domestic requirements and the demands of a new global marketplace, and U.S. organizations gain valuable international experience and are able to showcase their technologies and expertise in an emerging market.

EcoLinks is less than three years old but has already demonstrated its value both in the Region and the United States (U.S.) Its three-pronged approach to developing relationships among participants — providing technology transfer and investment leads and counseling to businesses, offering grants to facilitate partnerships, and maintaining an Internet presence that keeps all interested parties abreast of activities and the latest environmental developments — is both helping to enhance the ability of organizations overseas to improve the environment and building the strengths and promise of American businesses.

## **MR. MILICA OPACIC, GAVRILOVIC, FIRST CROATIAN SALAMI FACTORY**

“The EcoLinks Grant allowed us to implement a project much sooner than we would have been able to accomplish ourselves. The Project itself will bring immense benefit both to the company and to the environment in terms of financial savings due to reduced water input and in terms of reduced waste-water load to the recipient river.”





## The EcoLinks Program—Dedicated to Fostering Sustainable Environmental Partnerships

EcoLinks promotes sustainable relationships among businesses, local governments, and associations in Central and Eastern Europe, the Former Soviet Union (known collectively in USAID as the E&E Region), and the United States. To accomplish its mission, the program is organized around three interrelated sets of activities:

**Partnership Grants** strengthen the capacity of businesses and municipalities in the Region to solve environmental problems with partners from the United States or other countries in the Region;

**Technology Transfer and Investment** activities link the U.S. environmental industry with partners in the Region; and

**An Information Technology Initiative** accelerates use of the Internet by organizations in the Region to exchange information on environmental technologies and practices and to facilitate environmental technology partnering.

EcoLinks has placed staff in selected countries to manage its grant-making and trade and investment activities:

### ECOLINKS COUNTRY REPRESENTATION

COUNTRY	TECHNOLOGY TRANSFER & INVESTMENT	PARTNERSHIP GRANTS
Bulgaria	X	X
Croatia	X	X
Czech Republic	X	
Hungary	X	
Kazakhstan	X	X
FYR Macedonia		X
Romania	X	X
Russia Far East		X
Ukraine		X
Poland	X	

### Water and Sewerage Project, Kazakhstan EcoLinks Quick Response Award

In February 2000, Environmental Service and Technology Corporation (ENSAT) of Virginia, USA, wanted to submit a proposal for a World Bank tender in Kazakhstan, “Atyrau Pilot Water Supply and Sanitation Project, Consulting Services.” The aim of the project is to upgrade the municipal water supply and sewage collection systems for a portion of Atyrau city, located on the Caspian Sea in the far western part of the country. However, ENSAT needed a Kazakh partner with knowledge of the local situation and language and with relevant contacts in Kazakhstan.

With an EcoLinks Quick Response Award, ENSAT traveled to Kazakhstan and met with three local engineering companies. It selected one of them, Design Academy Kazgor, to join a consortium with two other U.S. companies to prepare and submit a proposal to the World Bank.

In June 2000 the World Bank notified ENSAT that its consortium had been awarded the \$560,000 contract. Robert Marszalkowski, ENSAT’s Director of Engineering, later commented, “An EcoLinks QRA is a great way to screen potential partners and find the best companies to work with.” ENSAT now plans to open an office in Kazakhstan and pursue additional opportunities in the country.

EcoLinks in-country staff are the core of the program’s partnering activities. They are supported by an exceptional group of partner organizations in the United States and the Region that share the EcoLinks vision of building sustainable international partnerships within the E&E Region, and between countries from the Region and the United States.





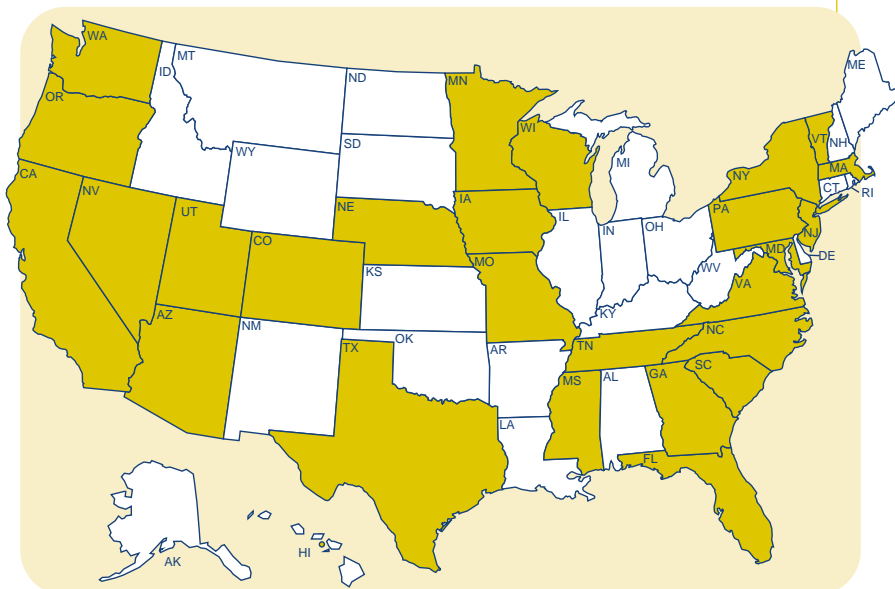
## Partnership Grants: Providing the Seeds for Sustainable Transboundary Partnerships

The EcoLinks Partnership Grants Program builds the capacity of businesses and municipalities in the Region to develop market-based solutions to urban and industrial environmental problems. EcoLinks is based on cross-border partnerships. By learning from each other or from the U.S. experience and capabilities, the countries in the Region can shorten the timeline for addressing environmental issues. EcoLinks partnerships are broadly defined, though all partnerships are expected to provide benefits to both parties.

Most EcoLinks grants facilitate partnerships between organizations in the region and the United States. By working closely with a U.S. partner from the earliest application stage, the local project initiator strengthens its capacity to develop and manage environmental projects that respond to market incentives. Moreover, the U.S. partners often introduce innovative technologies, encourage private initiative, and promote accountability and transparency in project management. In return, the U.S. partners have an opportunity to learn about market conditions in a transition country and explore the potential for a trade and investment relationship.

EcoLinks grants can also facilitate partnerships among countries in the region. The more advanced organizations in the region can share their experience in market finance and modern technologies with organizations that have had less exposure to new problem-solving approaches. These intra-regional linkages are important mechanisms for promoting regional stability. Whether the partnership involves a U.S. or regional organization, it is hoped that a mutually beneficial relationship will endure beyond EcoLinks financing.

***Through the end of 2000, 26 states and the District of Columbia have benefited from Challenge Grants.***



In addition, EcoLinks mainstreams the private sector into the assistance process. The need for environmental investments in the region is enormous. However, the central governments have constrained budgets, and the system for collecting fees for environmental penalties is ineffective in many countries. To close the gap between actual spending and need, significant amounts of private sector resources must be channeled to the environmental sector. Private sector participation ensures that solutions to environmental problems are market based, resulting in both environmental and economic benefits.

EcoLinks grants can support cross-sectoral linkages, or linkages between businesses and municipalities, that help to upgrade municipal infrastructure and deliver more efficient municipal services to the community. Grants can also link small-to-medium-sized enterprises that provide environmental services and technologies with larger industrial concerns. Again, since grants usually support pre-investment activities, these partnerships are expected to continue after EcoLinks financing ends and to implement the final stages of the project. EcoLinks offers several types of grants to

**SERGEI LIZENKO, CHIEF  
ENVIRONMENTAL SPECIALIST,  
"CONCERN "STIROL" UKRAINE**

“The participation in the program ECOLINKS has allowed to use experience and knowledge of the foreign experts for the decision of ecological problems, to establish the business relations with firms of USA. We consider organization of the program ECOLINKS very useful and timely.”

**DP ELEKTROSLAVONIJA OSIJEK  
(PROJECT LEADER—CROATIA)**

“The implementation of the project has enabled the development of a very fruitful cooperation between the National Rural Electric Cooperative Association and its Croatian partner HEP DP Elektroslavonija Osijek. The capacity building undertaken under the auspices of the project shall provide the necessary expertise to implement advanced financing mechanisms for power sector development in Eastern Croatia.”

provide seed funding to promote partnerships across national boundaries. By learning from each other or from U.S. experience and capabilities, the countries in the Region can shorten the timeline for solving environmental problems with a market-based approach. In E&E Region countries where businesses and municipalities need to strengthen their environmental management capacity, prepare financing plans, and introduce new environmental technologies, EcoLinks provides grants to link these organizations with U.S. partners or other partners in the Region. They work together on practical projects

that demonstrate both environmental and economic benefits. In addition, EcoLinks provides workshops to train these organizations to prepare project proposals.

Partnership Grants are administered by the

Institute of International Education and its partner, the Regional Environmental Center for Central and Eastern Europe. Program officers are based in Bulgaria, Croatia, Hungary, Kazakhstan, FYR Macedonia, Romania, the Russia Far East, Ukraine, and the United States to provide outreach and to monitor grant funds. Information about the grants award process is available on the EcoLinks website [www.ecolinks.org](http://www.ecolinks.org) - which allows interested associations and organizations to download grant applications and summaries of awarded grants.

### Types of Grants Available

The award of Partnership Grants is designed to be fair, transparent, and competitive. The three kinds of EcoLinks grants offered are discussed below.

#### ■ Challenge Grants

The Challenge Grants Program was launched in March 1999 in Central and Eastern Europe. Challenge Grants (up to \$50,000) support one-year projects that solve specific urban and industrial environmental problems. Applicants from the Region form project teams, with at least one cross-border partner, and prepare proposals in response to a Request for Applications, (RFA).

The fourth grants cycle was completed recently and included the New Independent States. Three topics have been used for the grant applications—Cleaner Production, Environmental Management Systems, and Global Climate Change. The RFA and grant topics were shaped to avoid “end-of-the-pipe” solutions and promote instead a market-based, cleaner-production approach. By using water, energy, and other input resources more efficiently, businesses and municipalities can





both save money and improve the environment. From the outset, the demand for the program far exceeded expectations—more than 400 concept papers were received for each cycle!

A total of 104 Challenge Grants were awarded with a value of more than \$4.8 million since the program's inception. Projects ranged from reducing leaks in water supply pipes in Romania to improving the energy efficiency in housing complexes in Bulgaria. The country breakdown follows:

Bulgaria	28
Croatia	6
Estonia	2
FYR Macedonia	10
Hungary	3
Kazakhstan	4
Poland	2
Romania	26
Russia Far East	6
Slovakia	7
Ukraine	10

#### ■ Quick Response Awards

Quick Response Awards were launched in January 1999, after a short pilot phase at the end of 1998. These awards (up to \$5,000) help initiate partnerships by providing the opportunity to meet with potential partners

### **Energy and Water Conservation Program, Bulgaria EcoLinks Challenge Grant**

Galatex AD, a cotton and textile processing plant located in Varna, Bulgaria, faces numerous challenges in adjusting to a market economy. The amounts of both energy and water it consumes per unit of production are exceptionally high, resulting in an annual energy bill of \$1.5 million. In addition, carbon dioxide emissions are estimated at 12,000–15,000 tons per year. Galatex recognized that improving its energy efficiency was essential for the success of its operations. With an EcoLinks Challenge Grant, Galatex partnered with a U.S.-Hungarian environmental consulting company, EETEK Energy Efficiency Technologies, to plan an energy and water conservation program at the plant. Their project demonstrates a successful methodology to identify and assess energy efficiency measures and shows the benefits of working with an energy services company (ESCO).

The project partners conducted both preliminary and detailed energy audits to measure current consumption, and they proposed specific measures to improve energy efficiency. These measures were supported by technical and financial evaluations and ranged from improvements in the plant's boiler and heating systems to updating the water distribution system for cooling. The partners also prepared an Energy Performance Contract that included terms and conditions for further cooperation between the organizations in implementing and financing the conservation program.

The results of the analyses show that implementation of the program will yield significant environmental benefits, such as reduced air emissions through decreased heavy fuel oil and electricity consumption, a decline in water losses, and reduced discharge of wastewater. When the energy and water conservation program is implemented, Galatex will also realize annual cost savings of \$800,000.

The project team's methodology to identify and assess energy efficiency measures can be easily transferred to other plants in the region that face similar problems. The project demonstrates the importance of selecting an independent and experienced consulting company and of establishing an energy council that ensures shared ownership of the project.

and discuss areas of possible cooperation. Since inception a total of 197 awards valued at more than \$840,000 have been made. The country breakdown follows:

Bulgaria	33
Croatia	10
Czech Republic	10
Estonia	1
Georgia	1
Hungary	14
Kazakhstan	17
Latvia	1
Lithuania	5
Macedonia	16
Moldova	1
Poland	18
Romania	26
Russia Far East	27
Slovakia	4
Ukraine	13

Of these QRAs, approximately 70 percent have led to Challenge Grant applications promoting environmental technology transfer and investment.

#### ■ **Twinning Grants**

These grants are an exciting new activity in EcoLinks. They are intended to support sustainable partnerships between U.S. organizations and counterparts in the Region and may be as large as \$250,000. This type of grant will fund two-year projects that help strengthen the institutional capacity of the Regional partner to address environmental issues with a market-based approach. Twinning Grants were launched in late 2000 on a pilot basis.





## Environmental Technology Transfer and Investment: Developing U.S. Opportunities for International Partnerships

The EcoLinks Technology Transfer and Investment activities strengthen linkages between the U.S. environmental business community and businesses, municipalities, and associations in the E&E Region seeking environmental technology partners - bringing mutual benefits to the countries and to the United States. Technology Transfer and Investment activities focused on selected E&E countries that are particularly well positioned to make significant environmental investments and to expand their indigenous environmental goods and service industries. The activities were launched in mid-1999.

The centerpiece of EcoLinks' Technology Transfer and Investment is a partnership between USAID and the U.S. Department of Commerce. Through this partnership, EcoLinks Environmental Technology Representatives (Tech Reps) have been placed in U.S. Commercial Service offices in U.S. Embassies in seven countries. Their mission is to seek environmental business opportunities for U.S. companies in their countries, and to assist those businesses interested in pursuing these opportunities. This partnership has been especially effective, building on the resources of two U.S. Government agencies that have particularly strong experience working on the ground in these countries with the private, municipal, and nongovernmental sectors.

The Department of Commerce brings to the EcoLinks partners a wealth of business resources, long-established contacts in the U.S. and regional business communities, and a ready-made support structure to facilitate U.S. to local business partnering. USAID brings to the partnership a ten-year record of achievement in assisting in sustainable development. Additional support for Technology Transfer and Investment activities comes from the Partnership Grants. QRAs are used to

facilitate meetings between U.S. companies and local business partners. Further, through the Global Technology Network (GTN), a project of USAID's Global Bureau, EcoLinks Representatives have an exceptional tool to reach more than 4,000 U.S. environmental businesses with information on partnering opportunities identified by EcoLinks Technology Representatives.

Another key partner in EcoLinks' Technology Transfer and Investment activities is the Environmental Export Council (EEC), a private voluntary

**JOSH LANIER, PRESIDENT,  
LIGHTSTREAM TECHNOLOGIES LTD.  
RESTON, VA**

“What would have easily taken us months on our own was accomplished in days by working through the EcoLinks Program. Zdenek Svoboda and the EcoLinks Program found us the best partner in our target market at the right time. We will continue to work with EcoLinks as we expand our market position in Central and Eastern Europe.”

### USAID's Global Technology Network & the Trade Lead Development Process

A project of USAID's Global Bureau, GTN facilitates matching of U.S. technology providers with overseas opportunities. GTN's database currently contains more than 4,000 registered small and medium-sized U.S. environmental firms. GTN covers more than 700 different environmental and renewable energy sub-sectors, including pollution control and prevention, environmental management, and waste treatment and disposal.

The GTN process begins when an EcoLinks Tech Rep identifies a business opportunity for environmental products or services. The Tech Rep works with the interested local organization to develop a fully qualified GTN trade lead, which includes the identification of specific environmental technology codes utilized in the GTN matching process. Once completed, the trade lead form is e-mailed to a U.S.-based International Trade Analyst, who reviews the lead and works with the Tech Rep to identify and fill any gaps. Once the lead is finalized, it is entered into the GTN database where all selected technology codes are matched with appropriate U.S. firms capable of providing the needed goods or services. These firms are notified of the opportunity via GTN's e-mail "push system." U.S. companies are asked to respond directly to the overseas buyer.

The Trade Analyst and Tech Rep then track each lead and offer follow-up services to facilitate communication and solidify the deal. The time from the initial contact between a local organization and Tech Rep and the time e-mails are sent to potentially interested U.S. firms is usually less than a month. After the trade notice is disseminated, the needs and interests of the U.S. firms and local organizations determine the pace of the lead's development.

## Ecolinks Partnership Program – Office Network

*Kiev, Ukraine*

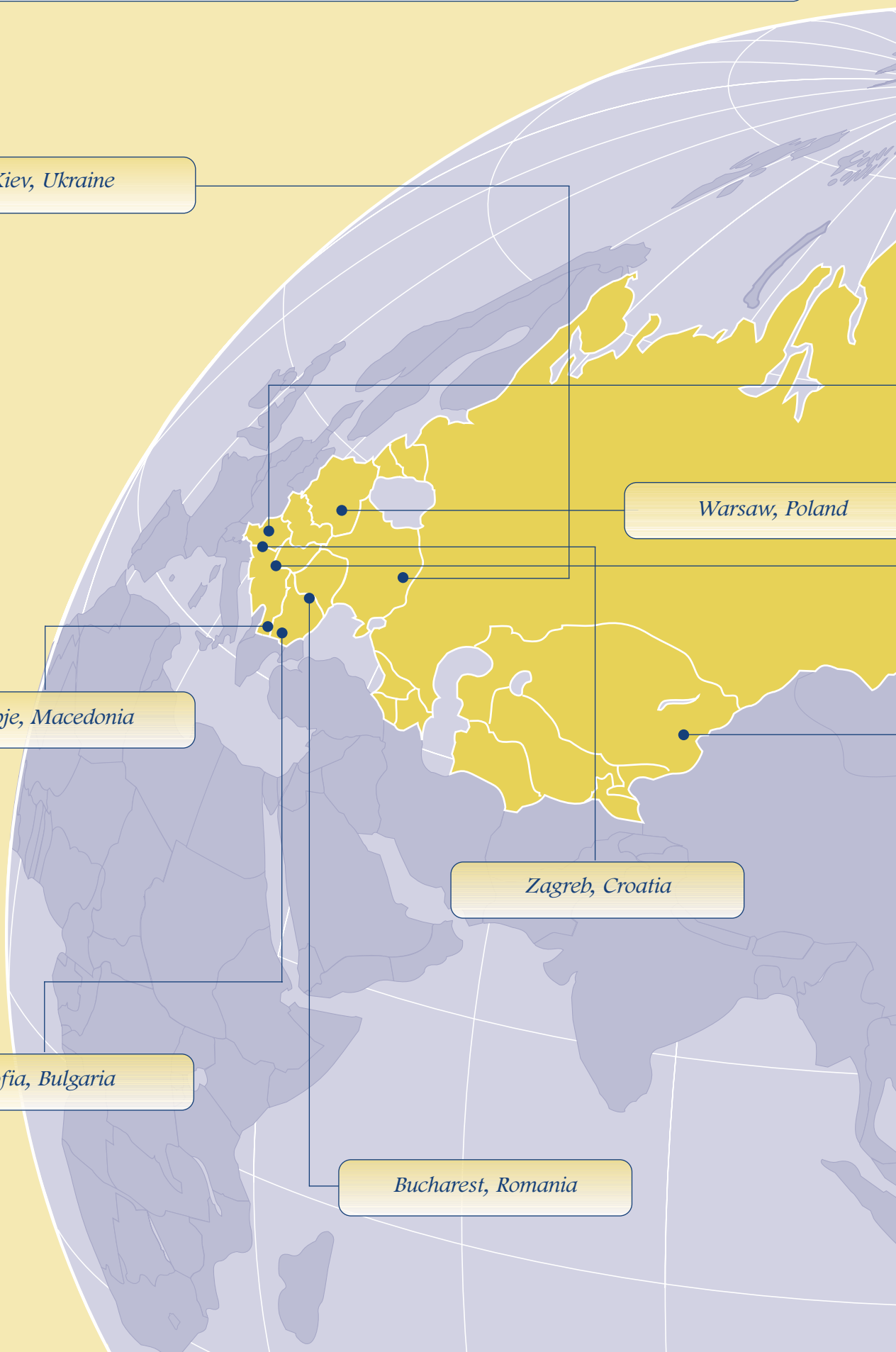
*Warsaw, Poland*

*Skopje, Macedonia*

*Zagreb, Croatia*

*Sofia, Bulgaria*

*Bucharest, Romania*







Washington, DC

Khabarovsk, Russia Far East

Prague, Czech Republic

Sakhalin Island

Vladivostok

Almaty, Kazakhstan

Budapest, Hungary

## **Talking Trash: A Conference on U.S. Solid Waste Management and Disposal Technologies**

The U.S. Counselor for Commercial Affairs in Warsaw, the U.S. Consulate General in Kraków, and the United States Agency for International Development's EcoLinks Program conducted a Conference on U.S. Solid Waste Management and Disposal Technologies in Warsaw and Kraków. The conference was held at two different locations in order to facilitate broader participation. The first session, held on November 14, 2000, was conducted at the Foreign Commercial Service Office in Warsaw and the second was held on November 15, 2000, at the Office of the U.S. Consulate General in Krakow.

The conference presented a unique opportunity for American firms to make use of the powerful combination of EcoLinks and the U.S. Commercial Service. It was attended by more than 60 people, including seven mayors, four deputy mayors, six directors of Municipal Engineering and Environmental Protection, and numerous directors of local waste management companies, senior officers from local venture capital firms, and senior members of local, regional, and national environmental funds. Participants came from both large and small cities.

The conference was organized in direct response to requests from two U.S. solid waste disposal and management companies and consisted of their presentations. Mr. Anwar Shareef, President of Alpha-Gamma Technologies, and Mr. John Willis, President of CP Manufacturing, gave presentations regarding their companies' solutions to waste problems.

- Alpha-Gamma offers a unique technology called "High Solids Anaerobic Digestion" (HSAD), which was developed by the U.S. Department of Energy's National Renewable Energy Laboratory. This technology converts organic waste into biogas and compost, both of which are valuable products. Unlike other anaerobic digestion processes, which can only handle approximately 10 percent solids, the HSAD process can handle up to 55 percent solids.
- CP Manufacturing is a leader in the production of recycling equipment for virtually any solid waste. It was the first company in the world to utilize automatic aluminum-can recycling equipment (in 1976). Currently, the company is one of the biggest producers of recycling lines for glass, paper, used batteries, plastics, steel, and aluminum cans.

Both Mr. Shareef and Mr. Willis had positive feedback concerning the conference and see significant potential for profitable results. Mr. Willis stated, "The conference was a good opportunity to educate local audiences about our company's services." Mr. Shareef noted that "the conference was extremely well attended by the kind of local organizations we want to get in contact with.... We have been in contact with EcoLinks for over a year. They have helped us identify opportunities in Poland and have put us in contact with local companies with whom we have submitted joint proposals."



organization representing the U.S. environmental industry. EEC works with the U.S. environmental business community in close coordination with the EcoLinks Environmental Technology Representatives and with business associations in EcoLinks countries to strengthen business-to-business relationships. EEC hosts a series of seminars and other outreach events across the United States to help make U.S. firms more aware of the environmental opportunities in the E&E Region. In the Region, EEC works with businesses and associations to develop joint U.S.-Regional programs to strengthen the trans-Atlantic environmental business dialogue. In addition to these efforts, EEC is in the process of developing a U.S. alliance of firms and organizations that will further enhance dialogue between U.S. companies and groups and organizations facing serious environmental challenges within the E&E Region.

EcoLinks partners have been very active in the Region and in the United States in advancing transboundary relationships (see Annex). For example:

### ***Finding business opportunities —***

Environmental Technology Representatives have identified more than 80 business opportunities in E&E countries for U.S. firms.

Through the Global Technology Network, these opportunities have reached more than 6,800 U.S. companies and have resulted in more than 100 documented letters of interest from U.S. firms. EcoLinks representatives are assisting these firms in following up with prospective partners, including arranging meetings, advising them on markets in the countries, and assisting them with identifying sources of financing for environmental projects. Since program inception, the Tech Reps have assisted more than 45 U.S. companies visiting their countries.

**Facilitating environmental business partnerships** — While international business agreements typically require many months to complete, the efforts of EcoLinks Technology Representatives are beginning to be realized. Over the past year, EcoLinks activities have resulted in nine business deals or distribution agreements. Over the next few years, EcoLinks expects that many more agreements will be completed based on the efforts of the first year.

**Conducting outreach in the Region** — All of the EcoLinks representatives carry out extensive outreach activities with local business and municipal leaders to identify their environmental needs and partnering interests, and to inform them of U.S. technologies and experience relevant to their needs. These activities include public seminars providing an opportunity for U.S. companies to present their capabilities and technologies. They have also participated in major environmental technology trade fairs throughout Europe, such as Pollutec (France), Poleko 2000 (Poland), and Envi-Bрно (Czech Republic).

In November 2000, EcoLinks co-sponsored the US/Europe Partnering Event for Environmental Technologies in Amsterdam, the Netherlands, a conference supported by the U.S. and Netherlands governments to facilitate U.S. and European environmental

technology partnering. EcoLinks representatives from six countries assembled delegations from more than 20 companies to attend the event, and led a seminar to present opportunities in their countries.

**Conducting outreach in the United States** — Through its partners, EcoLinks is pursuing a vigorous outreach strategy to inform U.S. environmental companies and associations of opportunities in the E&E Region. During 2000, EcoLinks Environmental Technology Representatives have brought delegations from their countries to introduce

**VODITELJ PROJEKTA KOMUNALNO  
PODUZEĆE. TOPUSKO, CROATIA**

“This project, financed by EcoLinks organization, has not only financially supported our professional efforts to improve the level of quality of services in a very remarkable way (great results can already be seen), but has also significantly changed our ways of looking at development of international partnership. We would like to use this space to thank and praise our partners and especially EcoLinks staff that we have cooperated with in a perfect way.”



**ANWAR SHAREEF, PRESIDENT, ALPHA-GAMMA TECHNOLOGIES  
RALEIGH, NC**

“We have been in contact with EcoLinks for over a year. They have helped us identify opportunities in Poland and have put us in contact with local companies with whom we have submitted joint proposals. The [EcoLinks Promotional Seminar] was extremely well attended with the kind of organizations we wanted to get in contact with.”

them to U.S. companies at a number of major environmental trade shows, including EnviroExpo (Boston, MA), Waste Expo (Atlanta, GA), and WEFTEC (Anaheim, CA).

**PETRO OLIYNUK, MAYOR OF  
CHERVONOGRADE, UKRAINE**

“The cooperation between Chervonograd City Executive Committee and Polish environmental company EKO FOL-II S.A. from Bytom on municipal waste management program in Chervonograd in the frame of EcoLinks Program, gives us unique possibility to get acquainted with modern environmental technologies.

Thanks to participation in EcoLinks, the project community of Chervonograd is making first and decisive step on the way to sustainable development.”

Representatives of the Environmental Export Council, the Global Technology Network, and USAID have participated in environmental finance seminars sponsored by the Department of Commerce across the United States to inform environmental companies of opportunities and public and private sector resources available to them to support their export activities. In addition, EEC has conducted seminars, EcoLinks/EEC Market Opportunity Series Seminars: Environmental

Markets in Europe and Eurasia, in Pittsburgh, PA, and Chicago, IL, and plans to expand these seminars and to conduct them at various locations across the United States.



**Preparing Market analyses and reports —**

Over the past year, the EcoLinks Environmental Technology Representatives have conducted extensive reviews of environmental markets in their countries, and have published reports directed to U.S. companies and organizations interested in expanding their activities in the Region. These include 66 International Market Insights, comprehensive overviews of environmental developments that affect the demand for environmental goods and services, and three Industry Sector Analyses. These reports are available to U.S. organizations on the Ecolinks website, [www.ecolinks.org](http://www.ecolinks.org).





## **U.S. Environmental Technology Company Signs \$9.7 Million Deal with Czech Partner**

An environmental technology trade success story has emerged from the EcoLinks Program in the Czech Republic. EcoLinks has facilitated a trade deal that will generate nearly 10 million USD in revenue over the next few years for the U.S. company LightStream Technologies, Ltd.

This success story is the end result of a U.S. Department of Commerce regional initiative to link potential U.S. and local business partners through the aptly named “Gold Key Service” (GKS). GKS is a customized program for export-ready U.S. companies. Through this service, EcoLinks Technical Representatives in target countries arrange appointments for U.S. companies with pre-screened contacts who have matching interests and objectives.

The EcoLinks Technical Representative in Prague (Mr. Zdenek Svoboda) facilitated the GKS for LightStream Technologies, Ltd., a Reston, Virginia-based manufacturer of UV water disinfection technology, called AOT® - Advanced Oxidation Technology. LightStream engineers developed an advanced form of UV energy for AOT®, eliminating the need for chlorine, chemicals, and mercury bulbs in water disinfection processes.

Mr. Svoboda worked with Mr. Josh Lanier of LightStream to set up five meetings with prospective Czech partners in the early part of 2000. As the result of these meetings, LightStream selected the Czech-based company SOKOFLOK as its strategic partner in the Czech Republic. Both companies signed a Memorandum of Understanding (MoU) in which LightStream Technologies will deliver 150 units of AOT®, priced at approximately \$65,000 each. Over the lifetime of the current agreement (five years), the deal is expected to bring in \$9,750,000 in export value.

Regarding the meetings and his interactions with Ecolinks, Mr. Lanier had the following to say:

*“What would have easily taken us months on our own was accomplished in days by working through the EcoLinks Program. Zdenek Svoboda and the EcoLinks Program found us the best partner in our target market at the right time. We will continue to work with EcoLinks as we expand our market position in Central and Eastern Europe.”*

Clearly, the Central and Eastern European market is opening up for U.S. providers of advanced environmental technologies, technical know-how, and services such as LightStream. These U.S. companies can generally provide advanced technologies at affordable prices to local companies in the region, enabling a relatively rapid transfer of environmental technologies that otherwise may have not been introduced.

## Information Technology: Using the Internet to Accelerate Environmental Technology Transfer and Partnering

EcoLinks actively promotes use of information technology by environmental managers in the

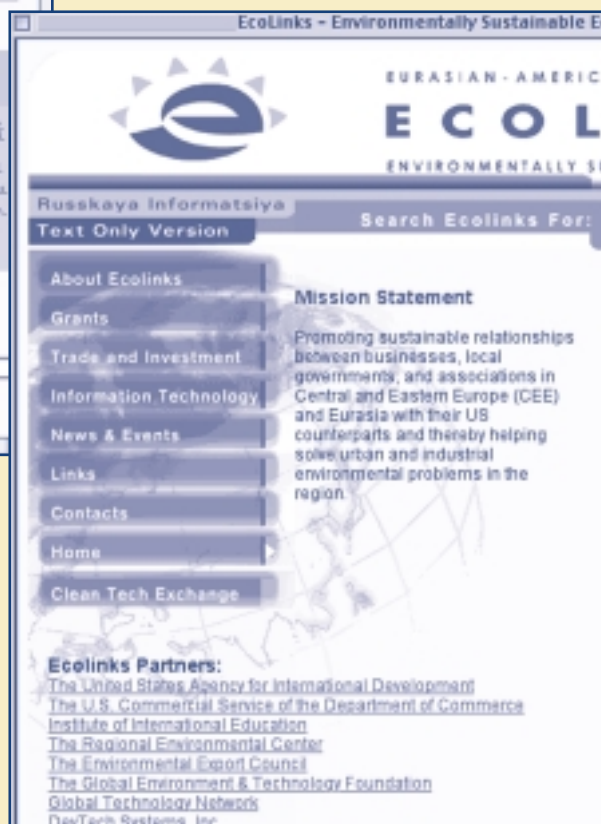
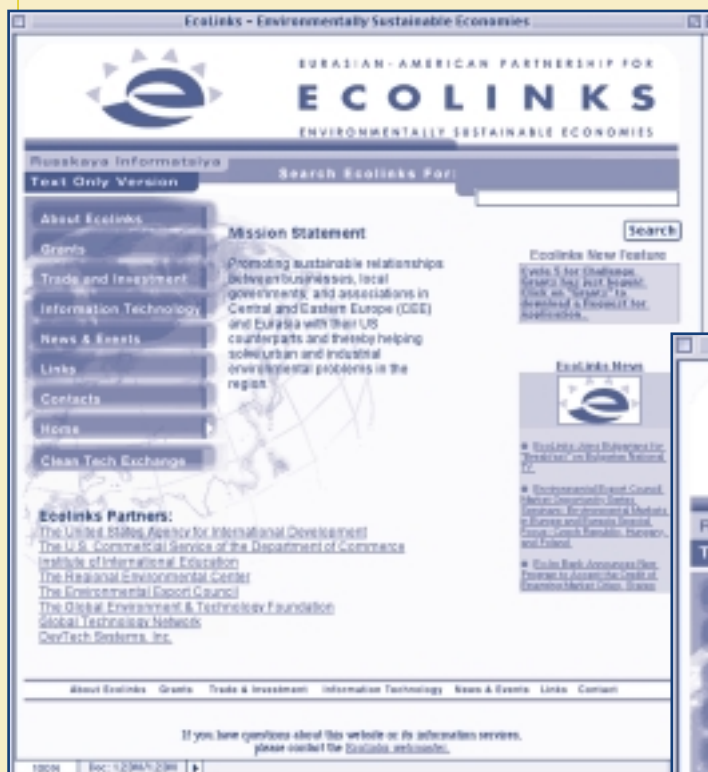
E&E Region to facilitate environmental technology transfer and partnering. The EcoLinks website, managed by DevTech Systems, Inc., provides a comprehensive guide to environmental information resources on the Internet that is updated

on a continuing basis. This guide includes links to key environmental, business, and financial information in each EcoLinks country.

EcoLinks' newest partner, the Global Environment & Technology Foundation (GETF), is developing an innovative website, the Clean Technology Exchange, to provide daily news feeds on environmental developments in the Region, and to provide an interactive platform for businesses, municipalities, and associations in 22 countries in Central and Eastern Europe and the Former Soviet Union as well as in the United States - with environmental needs and with environmental solutions - to come together to pursue potential partnership interests. Users of the site will be able to use it to find partners, locate financing, and access resources to support successful partnerships. GETF plans to launch the site in early 2001. GETF will manage the site and will evaluate its use to provide important lessons for further improvements in using the Internet as a medium for environmental technology transfer and partnering.

### JOHN WILLIS, PRESIDENT OF CP MANUFACTURING NATIONAL CITY, CA

"The [EcoLinks Promotional Seminar] was a good opportunity to educate local audiences about our company's services."





# EcoLINKS PARTNER ORGANIZATIONS

## ■ U.S. Agency for International Development

The U.S. Agency for International Development (USAID) is an independent federal government agency providing technical assistance and humanitarian aid to foreign countries to support the political and advance the economic interests of the United States. In addition to being viewed as a premier development agency, USAID has six principal goals crucial both to achieving sustainable development and to advancing U.S. foreign policy objectives:

- Broad-based economic growth and agricultural development.
- Democracy and good governance.
- Human capacity development education and training.
- Improved health and population growth slowed.
- Environmental protection (including energy).
- Disaster relief.

With headquarters in Washington, D.C., USAID's strength is its field offices (Missions) around the world. USAID works in close partnership with private voluntary organizations, indigenous organizations, universities, American businesses, international agencies, other governments, and other U.S. government agencies. USAID has working relationships with more than 3,500 American companies and more than 300 U.S.-based private voluntary organizations.

## ■ U.S. Department of Commerce

The U.S. Department of Commerce Commercial Service's worldwide network includes offices in more than 100 U.S. cities and at more than 80 overseas posts. This presence brings professional trade assistance to U.S. firms both at home and in more than 95 percent of the world market for U.S. exports. The Commercial Service provides a full array of trade assistance, including:

- Trade counseling,
- Trade contact services,
- Product and service promotion,
- Essential market research,

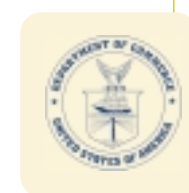
- Customized market research,
- Trade leads,
- Advocacy on behalf of U.S. business interests,
- Trade finance information and support,
- Promotion and management of trade shows,
- Organization of international trade missions,
- Credit checks on potential overseas business partners, and
- Certification of established trade events

## ■ Institute of International Education

The Institute of International Education (IIE) is dedicated to the international exchange of people and ideas. Its signature line, *Opening Minds to the World*, is emblematic of its commitment to build the capacity of future leaders to think and work on a global and intercultural basis. Founded in 1919 as an independent, nonprofit organization, IIE administers more than 200 international exchange programs, including the Fulbright Scholars Program, the Humphrey Fellowship Program, and the Lucent Global Science Scholars Program.

## ■ Regional Environmental Center

The Regional Environmental Center for Central and Eastern Europe (REC) is a non partisan, non advocacy, not-for-profit organization with a mission to assist in solving environmental problems in Central and Eastern Europe. The Center fulfills this mission by encouraging cooperation among non-governmental organizations, governments, businesses, and other environmental stakeholders; by supporting the free exchange of information; and by promoting public participation in environmental decision-making. The REC was established in 1990 by the United States, the European Commission, and Hungary. Today, the REC is legally based on a Charter signed by the governments of 25 countries and the European Commission, and on an International Agreement with the Government of Hungary. The REC has its headquarters in Szentendre, Hungary, and local offices in each of its 16 beneficiary countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, FYR Macedonia, Poland, Romania, Slovakia, Slovenia, and Yugoslavia.





#### ■ Environmental Export Council

The Environmental Export Council (EEC) is the only national nonprofit business alliance dedicated to promoting the transfer of environmental technology, expertise, and information worldwide and advancing private sector investment in environmentally sustainable development. Founded in 1992 and based in Washington, D.C., EEC is composed of environmental companies, industry associations, and organizations that are active internationally. To help expand environmental business overseas, EEC works directly with member companies to develop export promotion initiatives and public-private partnerships. EEC works directly with U.S. and overseas companies, organizations, and governments to develop private and public sector initiatives to create demand for U.S. environmental products and services.

#### ■ Global Environmental & Technology Foundation

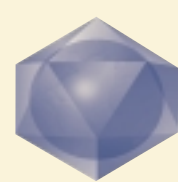
The Global Environmental & Technology Foundation (GETF) is a 501(c)(3) not-for-profit corporation that promotes the development and use of innovative technology to achieve sustainable development. For nearly a decade, GETF has brought industry, government, and communities together to address environmental challenges with innovative solutions. The US Clean Technology Exchange is a dynamic Internet-based tool to facilitate the exchange of information on innovative environmental technologies and practices and to stimulate environmental technology partnerships among E&E countries and the United States. The Exchange, accessible through EcoLinks' website, will provide a platform for U.S. and E&E Region technology providers, businesses, and municipalities with environmental challenges, and the international financial community, to come together to explore new alliances to meet the environmental needs of the region. The Exchange can help users to find partners, locate financing opportunities, and access resources to support successful partnerships.

#### ■ Global Technology Network

The Global Technology Network (GTN) is a USAID program in the Economic Growth and Agriculture Development Office of the Global Bureau. It is aimed at matching the technological needs of companies in developing countries with solutions from small- and medium-size U.S. companies. GTN facilitates the transfer of technology and services from the United States to countries worldwide through the dissemination of trade leads via e-mail. U.S. companies may register with GTN to receive trade leads at no cost. Business opportunities are identified by a network of participating in-country public and private sector representatives. These requests are transmitted from the field and electronically matched with U.S. firms registered in GTN's sector databases. Specific trade lead information is then forwarded, via e-mail or facsimile, to appropriate U.S. companies. GTN covers more than 700 different environment and renewable energy sub-sectors, including pollution control, treatment and disposal, and clean technologies.

#### ■ Environmental Information Systems and Networking Project

DevTech Systems, Inc. implements the Environmental Information Systems and Networking (EISN) project for USAID. EISN creates systems to share and publicize environmental information through the Internet. EISN also facilitates the exchange of information among professionals within the E&E Region and with their counterparts in the United States through the creation of networks, support of nongovernmental organizations, and conferences - thus increasing their capacity to manage and use environmental information. DevTech Systems staff and consultants provide technical assistance to regional environmental organizations on information transfer technology and work to strengthen regional networks of environmental professionals.



# 2000 AWARDED CHALLENGE GRANTS

## ■ First Cycle – 1999

### BULGARIA

Potential for Improved Environmental Performance and Expanded Ability to Use Recycled Paper at the ZKMO Kocherinovo Paper Mill  
**Leader:** ZKMO Kocherinovo, Kyustendil Region, Bulgaria  
**Partner:** New Horizon Management and Consulting, Fremont, NE

A Danube River Initiative  
**Leader:** Association of Danube River Municipalities, Belene, Bulgaria  
**Partner:** CalRecovery Inc., Hercules, CA, USA  
**Partner:** Institute for Environmental Strategies, Ltd., Sofia, Bulgaria

Energy Efficient Retrofit of the municipal Hospital “St.Ivan Rilski”  
**Leader:** Municipality of Gorna Oriahovitsa, Bulgaria  
**Partner:** Electrotek Concepts, Inc., Arlington, VA, USA

Energy and Water Conservation Program in Galatex Cotton Textile Plant  
**Leader:** Galatex AD, Varna, Bulgaria  
**Partner:** EETEK (Energy Efficiency Technologies), Budapest, Hungary

Capacity-Building and Demonstration Projects of Small-Scale Waste Management in Bulgaria  
**Leader:** Geopont-Intercom Ltd.; Varna, Bulgaria  
**Partner:** DSM Compost, Inc.; Ascutney; Vermont,

A Flexible Model for Environmental Management Systems for Municipalities  
**Leader:** Polyconsult E.C.O.; Sofia, Bulgaria  
**Partner:** Environmental City Network/Pittsburgh Technology Council;Pittsburgh,PA

Effective Environment Management Implementation in the Bulgarian Industry  
**Leader:** Clean Industry Center, Bulgarian Industrial Association, Sofia, Bulgaria  
**Partner:** Camp, Dresser and McKee, Cambridge, MA

Energy Efficiency Action Plan for Sofia Building Stock  
**Leader:** Municipality of Sofia, BULGARIA  
**Partner:** Good Consulting, Washington Grove, MD, USA

Using Renewable Hydro Energy Resources in Bulgaria  
**Leader:** Interconsult, Sofia, Bulgaria  
**Partner:** BET Engineering Consultants, East Hanover, NJ, USA

### HUNGARY

Living Machine Barge for the Danube  
**Leader:** Organica Ecotechnologies Ltd., Budapest, Hungary  
**Partner:** Living Technologies, Burlington, VT

### FYR MACEDONIA

Combining Energy Efficiency Measures and Fuel Conservation Measures  
**Leader:** DAVOS Invest Ltd., Skopje, Macedonia  
**Partner:** City Prof, Krakow, Poland

Solar Energy System Project in Hospital “Cair”  
**Leader:** Eterna Solar-Doel, Skopje, Macedonia  
**Partner:** Camarco Bros. Inc., Sofia, Bulgaria

Technical Documentation for Gas Exploration in Kriva Palanka  
**Leader:** Municipality of Kriva Palanka, Kriva Palanka, Macedonia  
**Partner:** Overgas Engineering Ltd., Yambol, Bulgaria

Upgrading of Lignite by Ecological Briquettes  
**Leader:** Energobriket Brik DOO, Skopje, Macedonia  
**Partner:** Briquettes Factor EAD, Stara Zagora, Bulgaria

### ROMANIA

Pilot Study of Leak Detection and Abatement Technologies  
**Leader:** Regia Autonoma Judeteana Apa Canal (RAJAC), Iasi, Romania  
**Partner:** Cavanaugh & Associates, Winston-Salem, NC

Implementation of Cleaner Technology at Astra Refinery  
**Leader:** Astra Romana Refinery, Ploiesti, Romania  
**Partner:** Leggette, Brashers & Graham, Inc., White Plains, NY

Program Development Aimed to Solid Waste Recycling  
**Leader:** The Town Hall of Zalău City; Salaj County, Romania  
**Partner:** Varosi Szolgaltato Rt.; Szentendre, Hungary

Recycling and Reuse of PET Wastes  
**Leader:** S.C. CARMIS SRL, Iasi, Romania  
**Partner:** GeoScience and Technology, Winston-Salem, NC, USA

### SLOVAKIA

Treatment of Effluent Water from the Smolnik Mine  
**Leader:** Aquipur, Bratislava, Slovakia  
**Partner:** Knight Piesold and Co., Denver,CO

Upgrading Natural Gas Consumption for Central Heating Units in Bratislava  
**Leader:** Terming S.R.O.; Bratislava, Slovakia  
**Partner:** Honeywell Spol. S.R.O.; Prague, Czech Republic

## ■ Second Cycle – 1999

### BULGARIA

Landfill Biogas Extraction and Energy Utilization System at Bratovo Landfill  
**Leader:** Municipality of Bourgas, Bulgaria  
**Partner:** Brown, Vence & Associates, Inc., Roseville, CA, USA

Development of a Program for Energy Efficiency in Hotels and Restaurants  
**Leader:** Bulgarian Hotel and Restaurant Association, Sofia, Bulgaria  
**Partner:** Artemel International, Inc., Alexandria, Virginia & Euroinform, Ltd., Sofia, Bulgaria

An EMS Related to Dredging Works on the Bulgarian Black Sea Coast  
**Leader:** Black Sea Coastal Association (BSCA), Varna, Bulgaria  
**Partner:** Ogden Beeman & Associates Inc. (OBAI), Portland, OR, USA

Regional Environmental Management System  
**Leader:** Municipality of Rousse, Bulgaria  
**Partner:** City of Duluth, Minnesota & Municipality of Giurgiu, Romania

Training in Environmental Management Systems for Machine Building Companies  
**Leader:** Bulgarian Branch Chamber General Machine Building, Sofia, Bulgaria  
**Partner:** TeKontrol, Inc., Casselberry, Florida

Effective Management of the Rendering Activity in A.P.P. Zoohraninvest, Ltd.  
**Leader:** A.P.P. Zoohraninvest, Ltd., Stara Zagora, Bulgaria  
**Partner:** Kuykendall & Associates, Ridgeland, Mississippi

Cooling Rooms with Zero Ozone Depletion and No Emissions of Greenhouse Gases  
**Leader:** JSC Institute of Refrigeration and Air Conditioning, Sofia, Bulgaria  
**Partner:** Femtehnika KFT, Hodmezovasarhely, Hungary

ISO 14001 EMS Development and Implementation Support for Verila, Ltd  
**Leader:** Verila, Ltd., Sofia, Bulgaria  
**Partner:** Montgomery Watson Americas, Inc., Bellevue, WA, USA & Ecoplan – engineering, Ltd., Sofia, Bulgaria

Greenhouse Emissions Reduction and Energy Saving Program  
**Leader:** Polimeri PLC, Devnya, Bulgaria  
**Partner:** Transelektro Rt., Budapest, Hungary  
 Using Market Mechanisms to Improve Waste Management Services  
**Leader:** City of Blagoevgrad, Blagoevgrad, Bulgaria  
**Partner:** Moore Recycling Associates, Sonoma, CA, USA

### CROATIA

Cleaner Production in Osijek-Baranja County  
**Leader:** Croatian Chamber of Economy/County Chamber of Osijek, Croatia  
**Partner:** Dekont Umwelttechnik Ltd., Zlin, Czech Republic

Using the Extra Energy From Regional Waterworks

**Leader:** City of Obrovac, Croatia  
**Partner:** EcoPlant d.o.o., Zagreb, Croatia & CINK a.s., Karlovy Vary, Czech Republic

Cleaner Production: Reduction of Water Consumption and Wastewater  
**Leader:** Gavrilovic Ltd., Petrinja, Croatia  
**Partner:** Universal Aqua Technologies, Torrance, CA, USA

#### HUNGARY

Environmental Cost Accounting and Environmental Performance Evaluation  
**Leader:** Hungarian Association for Environmentally Aware Management (KOVET-INEM Hungary), Budapest, Hungary  
**Partner:** GT Strategies + Solutions, Potomac, MD, USA

#### KAZAKHSTAN

Making Chips Production More Environmentally Friendly  
**Leader:** United Technologies Company, Talgar, Kazakhstan  
**Partner:** Environmental Control Opportunities, Richmond, VA, USA & Savory Snacks, L.L.C., Madison, WI, USA

Development and Implementation of EMS for Karaganda Region  
**Leader:** Administration of the Akim of Karaganda, Karaganda, Kazakhstan  
**Partner:** Eurasia Environmental Associates, LLC, Reston, VA, USA

#### MACEDONIA

Hydropower from Bogovinjska River  
**Leader:** The Municipality of Bogovinje, Macedonia  
**Partner:** Paul C. Rizzo Associates, Monroeville, Pennsylvania

Project for Improving the Effluent Quality from Galvanizing Activities at Zastava  
**Leader:** Zastava AGP, Ohrid, Macedonia  
**Partner:** Amtech, Valparaiso, IN, USA

#### POLAND

Development of Wind Energy Project for the Municipality of Kisielice  
**Leader:** Municipality of Kisielice, Poland  
**Partner:** AWS Scientific, Inc., Albany, NY, USA

#### ROMANIA

Bankable Documentation for the Modernization of the District Heating System Supplying Jiului-Pajura Residential Area, Bucharest  
**Leader:** RADET-Bucharest District Heating Company, Romania  
**Partner:** World Power Technologies, Inc., New Jersey, USA & Global Energy Services Ltd., Romania

Municipal Waste Minimization and Recycling  
**Leader:** Mayoralty of Campulung Muscel, Romania  
**Partner:** Waste Management, Inc., San Leandro, CA, USA

Pilot Project for Recycling Solid Waste in Bucharest, District 5  
**Leader:** District 5 City Hall, Bucharest, Romania  
**Partner:** William C. Finn Associates, Inc., Marshfield, MA, USA

Energy Audit and Feasibility Study of Oltchim SA Petrochemical Plant  
**Leader:** SC Oltchim SA, Ramnicu Valcea, Romania  
**Partner:** Robert A. Watts Consulting Engineers, Annapolis, MD, USA

Development and Implementation of an EMS at the Steel Production Flow of SIDEX  
**Leader:** SIDEX SA, Galati, Romania  
**Partner:** Aquatest, a.s., Prague, Czech Republic

Municipal Solid Waste Minimization and Recycling in Iasi City  
**Leader:** CITADIN – Iasi municipal services company, Romania  
**Partner:** SEMSI – Swanson Environmental Management Systems, Highlands Ranch, CO, USA

Reduction of Greenhouse Gases from Cement Production through Combustion Optimization  
**Leader:** SC CIMUS SA- cement plant operator, Romania  
**Partner:** Chavond-Barry Engineering, NJ, USA & SC Gastar Srl, Bucharest, Romania

Development and Implementation of a Recycle/Reuse Program for Used Oils  
**Leader:** Prahova County Council, Romania  
**Partner:** CEVA International, Inc., NJ, USA

Energy Consumption Reduction at Drinking Water Distribution Pumping Station  
**Leader:** APATERM - Drinking water plant operator, Galati, Romania  
**Partner:** The Cadmus Group, Inc., Arlington, VA, USA

Environmental Management System at SC GCLT SA Targoviste  
**Leader:** SC GCLT Dambovita, Targoviste, Romania  
**Partner:** OMNNI Associates, Inc., WI, USA & SC Ceproar SA, Romania

Comprehensive Energy Conservation Program at SANEX SA  
**Leader:** SANEX SA (Ceramics Processing Factory), Cluj-Napoca, Romania  
**Partner:** IPATERV rt, Budapest, Hungary

#### RUSSIA FAR EAST

Solid Waste Recycling Plant for Yuzhno-Sakhalinsk  
**Leader:** Spetsavto Municipal Enterprise, Yuzhno-Sakhalinsk, Russia  
**Partner:** Vaughn and Melton, Greenville, Tennessee

A Model Training Program for Assisting Khabarovsk Krai Municipalities to Create Effective Environmental Policies and Procedures Using Data from Environmental Audits  
**Leader:** Committee on Economics, Administration of Khabarovsk Krai, Khabarovsk, Russia  
**Partner:** American International University Network, Ltd., Lincoln, Nebraska

Incorporation of Environmentally Acceptable Air Pollution Control and Ash Utilization Technology at the Vladivostok Municipal Waste-to-Energy Facility.  
**Leader:** Special Plant #1 of Vladivostok ("Speczavod"), Vladivostok, Russia  
**Partner:** Energy & Environmental Consulting Engineers (EECE), Mission Viejo, California

#### SLOVAKIA

Emission Reduction By Cleaner Technology Application in Coating Production Unit  
**Leader:** CHEMOLAK a.s., Smolenice, Slovak Republic  
**Partner:** SYNPO a.s., Pardubice, Czech Republic

Cleaner Production and EMS for Small Companies in Central Europe  
**Leader:** Calendula, a.s., Nova Lubovna, Slovak Republic  
**Partner:** KASKO, s.r.o., Slavkov, Czech Republic & Slovak Cleaner Production Centre, Bratislava, Slovak Republic

Minimization of Energy Consumption and Decreasing of Air Pollution in DeMiclén  
**Leader:** DeMiclén, a.s., Levice, Slovak Republic  
**Partner:** Aton Centrum, s.r.o., Zelenec, Czech Republic

System of Collection and Separation of Household Hazardous Waste from Municipal Waste and its Disposal  
**Leader:** The City Office of Banská Bystrica, Slovak Republic  
**Partner:** Ecotechniek spol. s.r.o., Brno, Czech Republic

Introduction and Implementation of EMS into Municipalities in Slovakia  
**Leader:** Local Authority of the City of Presov, Slovak Republic  
**Partner:** ETP Slovakia, Kosice, Slovak Republic & Barr Engineering Company, Minneapolis, Minnesota

#### UKRAINE

Development of Waste Management Program for the City of Chervonograd  
**Leader:** Municipality of Chervonograd, Chervonograd, Ukraine  
**Partner:** EKOFOI-II S.A., Bytom, Poland



Identifying the Priority Policies and Measures to Mitigate the Impacts of Climate Change in Small and Medium-sized Cities in Ukraine.

**Leader:** Municipality of Berdychiv, Berdychiv, Ukraine

**Partner:** Ecoenergy International Corporation, Washington, DC, USA & Agency for Rational Energy Use and Ecology, Kiev, Ukraine  
Development of EMS and Preparation for Certification with ISO 14001 Requirements

**Leader:** Concern Stirol, Gorlovka, Ukraine

**Partner:** Futurepast, Inc., VA, USA

Improvement of Energy Efficiency of Sanatoriums in Truskavets

**Leader:** JSC Truskavetskurort, Truskavets, Ukraine

**Partner:** Polish Network "Energy Cities", Krakow, Poland

Developing Olymp Sausage as a Model of Clean Production

**Leader:** Olymp Sausage, Kopychintsi, Ukraine

**Partner:** Mead & Hunt International, Madison, WI, USA

## Third Cycle – 2000

### BULGARIA

Reduction of Greenhouse Gases by Introducing Renewable Energy Resources

**Leader:** Municipality of Kyustendil, Bulgaria

**Partner:** Holzer Energy Management Co., Laurel, MD, USA

**Associate:** Black Sea Regional Center, Sofia, Bulgaria

Promotion of Energy Efficiency Measures in Casting Plant

**Leader:** Chugunoleene AD, Ihtiman, Bulgaria

**Partner:** Energopro, Kiev, Ukraine & Association of Energy Engineers, Sofia, Bulgaria

Environmentally Friendly Transport Based on Alternative Fuels and Transport

**Leader:** Municipality of Kardjali

**Partner:** Wilbur Smith Associates, Columbia, SC, USA & Institute of Transport & Communications, Sofia, Bulgaria

Co-generation and Energy Efficiency Program

**Leader:** Toplofikatcia Bourgas, Bulgaria

**Partner:** Smyser Associates, San Francisco, CA, USA

Conducting an Energy Audit to Identify and Assess Energy Conservation Measures

**Leader:** Elprom-Elin PLC, Bulgaria

**Partner:** Hagler Bailly Services, Inc., Arlington, VA, USA & Energy Efficient Systems Ltd., Sofia, Bulgaria

Reducing Emissions From Schools By Implementing Demand Side Efficiency Measures and Utilizing Existing Geothermal Sources

**Leader:** Municipality of Varna, Bulgaria

**Partner:** Centech Energy Marketing and Consulting, Ltd., Budapest, Hungary

Pollution Abatement Strategy for Arbanassi, PLC, Bulgaria

**Leader:** Arbanassi, PLC, Bulgaria

**Partner:** Tetrahedron, Inc., Baltimore, MD, USA

A Public/Private Project for Water Treatment and Delivery

**Leader:** The Municipality of Haskovo, Bulgaria

**Partner:** Clearwater Consultants, Inc., Starkville, MS, USA

Best Management Practices for Cleaner Production at the Rock Quarry "Skakavitsa"

**Leader:** Bulgarian State Railroad Company, Sofia, Bulgaria

**Partner:** Ross and Parks, Inc., Washington, DC, USA & Minenergo OOD, Sofia, Bulgaria

### CROATIA

Topusko Energy Efficiency and Water Conservation Project

**Leader:** Communal Company

Topusko, Croatia

**Partner:** LEM Projekt s. c., Krakow, Poland

Introduction of Environmentally Friendly Processes in Leather Production

**Leader:** Croatian Association of Leather and Footwear Manufactures (HDKO), Zagreb, Croatia

**Partner:** Ingstav Ostrava a. s., Ostrava, Czech Republic

Promoting and Financing Energy Efficiency and Renewable Energy

**Leader:** Hrvatska Elektroprivreda d.d., Osijek, Croatia

**Partner:** National Rural Electric Cooperative Association, Arlington, VA, USA

### ESTONIA

Protection of Ordovician Cambrian Ground Water Resources

**Leader:** Vasalemma Municipality, Estonia

**Partner:** Building Consulting Entrepreneurial JSC (BKD AS), Riga, Latvia

Energy Production of Waste and Biomass

**Leader:** Kuressaare Town Government, Estonia

**Partner:** SCS Engineers, Reston, VA, USA

### HUNGARY

Converting Used Oil Filters and Containers to Recyclable Materials

**Leader:** Ravisz '96 Kft., Budapest, Hungary

**Partner:** Universal Technical Resource Services, Inc., Cherry Hill, NJ, USA

### KAZAKHSTAN

Reducing Pollution From Car-Wash Centers

**Leader:** Municipality of Almaty City, Kazakhstan

**Partner:** Shell Engineering & Associates, Inc., Columbia, MO, USA & Gornoe Buro, Ltd., Almaty, Kazakhstan

Process Efficiency Upgrades and Cyanide Recycling at Akbakai Gold Mine

**Leader:** JSC Altylnalmaz, Kazakhstan

**Partner:** EnviroNet Management Systems LLC, Arlington, VA, USA

### MACEDONIA

Geothermal Project "Vinica"

**Leader:** Vinica City Hall, Macedonia

**Partner:** Geo Hills Associates, Reno, Nevada

Modernization of Landfill Through Degasification and Energy Utilization

**Leader:** Drisla Municipal Landfill Company, Macedonia

**Partner:** Ecostan, Radom, Poland & Energo sistem, Skopje, Macedonia

Minimizing Toxic and Hazardous Raw Materials during the Galvanization Process

**Leader:** AD "Prolux", Macedonia

**Partner:** McLaughlin Water Engineers, Denver, CO, USA

Rehabilitation of Small Hydro Power Plants

**Leader:** Electric Power Company of Macedonia

**Partner:** Elektroprojekt, Zagreb, Croatia

### POLAND

Photovoltaics in the Suburban Environment

**Leader:** The Office of Municipality (Gmina) Warszawa-Wawer, Poland

**Partner:** BP Solarex, Baltimore, MD, USA

### ROMANIA

Improvement of Energy Efficiency and Ambient Conditions at Hospital no.1

**Leader:** Municipal Hospital no. 1, Craiova, Romania

**Partner:** Ex En Ltd., Kiev, Ukraine & SCINTI Srl., Chisinau, Moldova

Renewable (solar/wind) Electric Power Systems in Romania

**Leader:** Local Council of Bulz, Bihor, Romania

**Partner:** Southwest Windpower, Inc., Flagstaff, Arizona & ICMENERG SA – Energy Research Institute, Bucharest, Romania

Reducing the cyanide and heavy metals water contamination at SC Elmet SA

**Leader:** SC Elmet SA, Cluj-Napoca, Romania

**Partner:** Hoffland Environmental, Inc., Conroe, Texas

Feasibility Study to Improve the Quality of Drinking Water of Dej Town

**Leader:** SC Somes SA, Dej, Romania

**Partner:** Lemna International, Inc., Minneapolis, Minnesota

Energy Efficient Wastewater Collection and Treatment Programs for Satu Mare City

**Leader:** Regia Autonoma Comunală Satu Mare (Water Authority), Satu Mare, Romania

**Partner:** Vituki Consult Rt, Budapest, Hungary

Technical Alternatives for the Improvement of Wastewater Management System

**Leader:** SC Nectar SA, Pascani, Romania

**Partner:** Aponowich Driscoll & Associates, Inc., Atlanta, Georgia

Reduce Emissions and Discharges from Resin and Paint Manufacturing Processes

**Leader:** POLICOLOR, Bucharest, Romania

**Partner:** IT Corporation, Knoxville, TN & Colt International, SA, Bucharest, Romania

Energy Efficient Improvement of Baia Mare District Heating

**Leader:** SC Energoterm SA, Baia Mare, Romania

**Partner:** Energy & Resource Solutions (ERS Inc.), Haverhill, MA & SC Trapec SA, Bucharest, Romania

Reducing Wastewater Contaminated with Fibers and Organic Dissolved Substances

**Leader:** SC Celhart Donaris SA, Braila, Romania

**Partner:** Ekono, Inc., Bellevue, WA & SC Ceprohart SA, Braila, Romania

Development of Strategic Plan on Drinking Water Control in Targu Mures City

**Leader:** RA Aquaserv (Water Utility), Targu Mures, Romania

**Partner:** AquAcust Water Loss Analysis Co. Ltd, Budapest, Hungary & Fovarosi Vizmuvek Rt., Budapest, Hungary

Energy Efficiency System

**Leader:** SC Compa SA, Sibiu, Romania

**Partner:** The Energy Group, Little Falls, NY & Hydro X, Brasov, Romania

#### RUSSIA FAR EAST

Model Program of Waste Disposal Control at Sinegorskaya Mine

**Leader:** Sinegorskaya Mine, Yuzhno-Sakhalinsk, Russia

**Partner:** EarthFax Engineering, Inc., Midvale, Utah

Minimization of Waste Products at a Heat Electric Power Station

**Leader:** Vladivostok Heat Electric Power Station 2 (VHEPS-2) of JSC Dalenergo, Russia

**Partner:** Power Tech Associates, P.C., Paramus, NJ, USA

Modernization of Hot Water Supply Systems in Municipal Buildings

**Leader:** Department of Housing, Yuzhno-Sakhalinsk City Administration, Russia

**Partner:** Joseph Technology Corporation, Inc., Montvale, NJ, USA

#### UKRAINE

Complex Preparation of Coal Mine Methane for Utilization

**Leader:** State Open Joint Stock Company "Krasnoarmeyska-Zakhidna N1 Mine"

**Partner:** BCCCK Engineering, Inc., Midland, TX, USA

Wood Biomass as an Alternative to Existing Conventional Energy

**Leader:** Verkhovina Region Administration, Ukraine

**Partner:** Sentech, Inc., Bethesda, MD, USA

Reduction of Harmful Emissions by the Odessa Central Heating and Power Plant -2

**Leader:** Regional Communal Utility Odessa CHPP-2, Tepلودar, Odessa Oblast, Ukraine

**Partner:** SRC International CS s.r.o., Prague, Czech Republic

Reducing Greenhouse Gases Emissions through Anaerobic Treatment of Wastewater

**Leader:** JSC "Bilosvyt-Uman" (Dairy), Uman, Cherkasy Oblast, Ukraine

**Partner:** Biothane Corp., Camden, NJ, USA & MBS Ltd., Kiev, Ukraine

Reconstruction of Heat Supply System at "Izumrud" Enterprise

**Leader:** Joint-Stock Enterprise "Izumrud", Kiev, Ukraine

**Partner:** "GOGAS Raduzhnyi" Ltd., Vladimir, Russia & "LOTA" Ltd., Kiev, Ukraine









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